



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB H4749-1
Job Sheet 174164



Part No: RB H4749-1

Job Qty: 1 ea

Part Name: Drain Hose Body



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/12/18

Job Tracking No:

Due Date: 3/16/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RB H4749 Rev 5A IPP Rev A 18.03.12 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	10 Ea		3/15/18	0.00	0.00	Start Up Machining-3		
110	CNC Lathe	10 pcs		3/16/18	0.00	10.00	MORI SL-154		
120	QC	10 pcs		3/16/18	0.00	0.00	QC2 Machining-4		
130	QC	10 pcs		3/16/18	0.00	0.00	QC8 Machining-4		
150	Outsource	10 pcs		3/16/18			ATG001-VC	15	
160	Packaging	10 pcs		3/16/18	0.00	0.00	Packaging2		
170	QC	10 pcs		3/16/18	0.00	0.00	QC6		
180	Packaging	10 pcs		3/16/18	0.00	0.00	Packaging3-1		
190	QC21-SA	10 Ea		3/16/18	0.00	0.00	QC21		

Part Op 110 - 1-Machine as per DWG. FB974 FOLIO REV: _____ DWG REV: _____ 2-Debur

Descriptions: 120 - Engrave T/N Using Marktronic engraver as per DWG.

150 - Issue P/O to ALTECH - ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant - Certificate of Conformity is required

ALTECH

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6R1.125	6061 Round Bar 1.125	4.3300 ft (.433 ea)	90-Start up Operation	SC61729 5.2

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M6061T6R1.125	4	8	0

Part Specifications



Container No: S070851



Part: RB H4749-1

Job No: 174164

Serial No/Batch: S070851

Revision: 5A

Inspector:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

46 AM Dart.lajeunesse.marie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	☐	Past Due ☐					

DART AEROSPACE LTD		Work Order: 174163
Description: Drain Hose Body		Part Number:
Inspection Dwg: RB H 47 49-1	Rev: 5A	Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.135	$\pm .005$	0.134	✓		Vern CVC-19	
Ø.430	$\pm .005$	.430	✓		Vern LPO8	
Ø.320	$\pm .005$	.320	✓		↓	
Ø.610	$\pm .005$	.610	✓		↓	
4.98	$\pm .01$	4.985	✓		↓	
3.025	$\pm .005$	3.027	✓		H. gage	
2.70	$\pm .01$	2.700	✓		Vern LPO8	
.250	$\pm .005$	.250	✓		↓	
.05	$\pm .01$	0.051	✓			
Ø.312	$\pm .005$	.312	✓		Vern LPO8	
.03 x 45°	$\pm .01 \times .5^\circ$	.03 x 45°	✓		↓	
.09	$\pm .01$	.092	✓		↓	
25°	$\pm .5^\circ$	25.4°	✓		Opt comp	
1.550	$\pm .005$	1.550	✓		↓	
1.35	$\pm .010$	1.350	✓		Vern LPO8	
.080	$\pm .005$	.081	✓		↓	
.300	$\pm .005$	.299	✓		↓	
Ø.498	$\pm .001$	.498	✓		Mic LPO1	
Ø.470	$\pm .000 / \pm .005$	.467	✓		Mic LPO1	
Ø.500	$\pm .000 / \pm .005$	.496	✓		↓	
Ø.25	$\pm .01$	.252	✓		Vern LPO8	
4.94	$\pm .000 / \pm .01$	4.935	✓		↓	
Ø1.06	$\pm .01$	1.062	✓		↓	
1.38	$\pm .01$	.375	✓		↓	
Ø1.60	$\pm .01$	1.600	✓		↓	
.125	$\pm .005 / \pm .000$	.125	✓		↓	
.090	$\pm .005$	.089	✓		↓	
.042	$\pm .005$	.044	✓		↓	
.235	$\pm .005$	.235	✓		H. gage	

Measured by: P/V 18/5/15	Checked by: B.A.	QC Inspector:
Date: 18-05-12	Date: 18-05-15	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



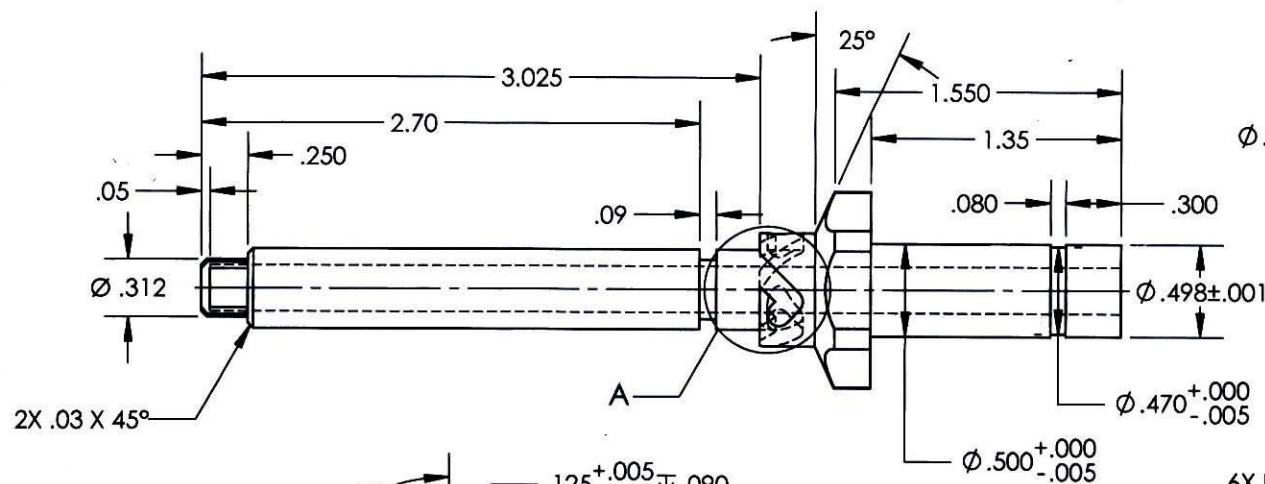
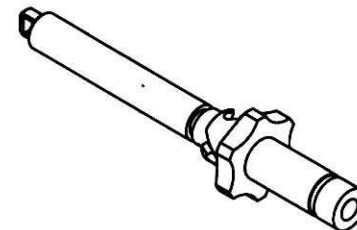
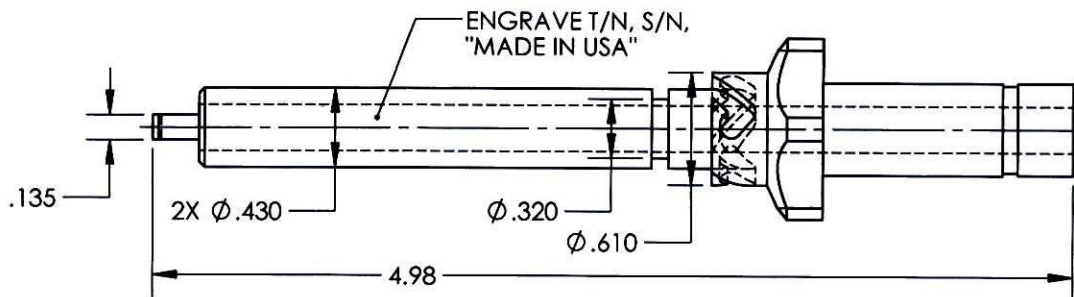
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

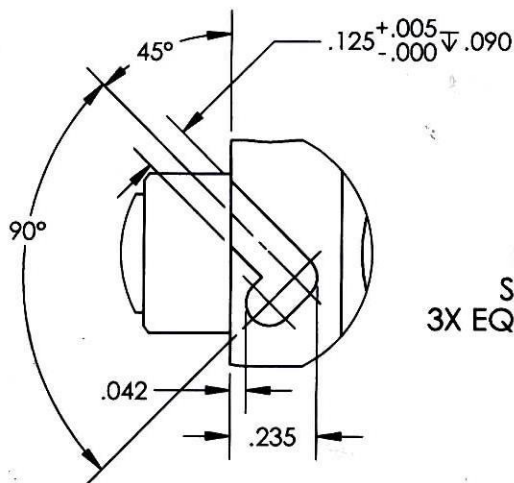
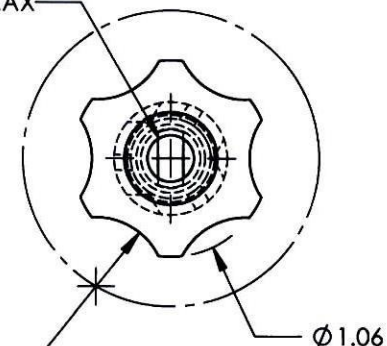
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REVISIONS			
REV	DESCRIPTION	DATE	INITIAL
4	INCREASED STEM LENGTH FROM .80 TO 1.35, REMOVED BARB ADDED GROOVE.	7/24/2012	JAG
5	ADDED MISSING DIM $\phi .312$, CH'D DIM WAS .125 IS .125 $\pm .005$ $\nabla .090$	2/26/2013	BIM
5A	-1 CH'D TOL TO 2 PLC ON 1.35, .05, & 4.98, DP 4.935 TO 4.93 MAX, WAS $\phi 1.062$ IS $\phi 1.06$, CH'D NOTES WAS ENGRAVE P/N IS ENGRAVE T/N, S/N, "MADE IN USA", WAS 6X R.375 EQUALLY SPACED IS 6X R.38 EQUALLY SPACED ON $\phi 1.60$ B.C. DELETED .244, .096.	1/30/2014	JAG



$\phi .25 \nabla 4.94$ MAX

6X R.38
EQUALLY SPACED
ON $\phi 1.60$ B.C.



DETAIL A
SCALE 2:1
3X EQUALLY SPACED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 174164
20180501

RED BARN MACHINE	
TITLE T/R GEAR BOX DRAIN TOOL	
DWG NO. RB H4749-1	
REV 5A	
MATL 6061	DRAWN BY: GILBERT
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED D Weil
.XXX ± .005	REAT
.XX ± .01	TREAT
.X ± .1	FINISH RED ANODIZE
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	SPEC MIL-A-8625F, TYPE II, CLASS II
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL BELL 407
SCALE 1:1	DATE 7/24/2012
SHEET 2 OF 2	

1378



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040034**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO040034
PO Date: 5/29/18
Due Date: 6/1/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Tsimiklis, ChrisoulaPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	173920	RBE350A94-3700-C-09	Knurled Nut -Issue P/O to Groupe Altech; PO -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	6/1/18	31 pcs	0 pcs	31 pcs	\$3.87096774/pcs	\$120.00
						131x			At 18/06/05	
2	174164	RB H4749-1	Drain Hose Body -Issue P/O to ATG : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	6/1/18	11 pcs	0 pcs	11 pcs	\$10.90909/pcs	\$120.00
						11x			At 18/06/07	

Grand Total: \$240.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 5/30/18 10:15 AM dart.tsimiklis.chrisoula

Certificat de Conformité / Certificate of Compliance

(009800-2)



2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

009800 - 2

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.					
06-Jun-2018		Aman		PO040034					
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order	
2	RB H4749-1 Rev.	RB H4749-1 01 -ANO-RED [ANODIZE RED] IAW MIL-A-8625 TYPE 2 CLASS 2 WATER SEALANT <i>DAS 9 9-89</i>	ANODIZE CH	11	11	0	0	0	

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.